ELSEVIER

Nuclear Engineering and Design 160 (1996) 441–443

Nuclear Engineering and Design

Contents of Volume 160

CONTENTS OF ISSUE 160(1–2)

Extended and Updated Selected Papers from ENS TOPNUX '93 The Hague, Netherlands, 25–28 April, 1993

Safety objectives for next generation reactors: Proving their achievement, *P.Y. Tanguy* 1
Economics of nuclear electricity and inter-fuel competition, *P. Silvennoinen* 5

Regular Papers

Engineering Mechanics

Aircraft crash upon outer-containment of nuclear power plant, *H. Abbas, D.K. Paul, P.N. Godbole and G.C. Nayak* 13
Deformation and perforation of clamped work-hardening plates struck transversely by blunt missiles, *H.-M. Wen* 51
Investigation of samples taken from Kozloduy unit 2 reactor pressure vessel, *A. Kryukov, P. Platonov, Ya. Shtrombakh, V. Nikolaev, E. Klausnitzer, C. Leitz and C.-Y. Rieg* 59
Fracture analysis of full-scale pipe experiments on stainless steel flux welds, *S. Rahman, G. Wilkowski and F. Burst* 77
Stress intensity factors of two bonded half-plane problem with a point heat source, *C.K. Chao and S.J. Chen* 97
Analysis of the fluid-elastic vibration of a U-bend tube bundle induced by cross-flow in PWR steam generators, *W. Cheng and I. Finnie* 111
Elastic-plastic fracture assessment using a $J-R$ curve by direct method, *E.P. Asta and E. Chomik* 129
Crack initiation, crack growth and fracture behaviour of large diameter pipes with circumferential defects under internal pressure and superimposed alternating bending load, *W. Stoppler, D. Sturm, K. Hippelein and A. de Boer* 137

Materials Engineering

Calculation results from radiation embrittlement of VVER pressure vessel at Kozloduy NPP, *T.G. Apostolov, Kr. D. Ilieva and T.M. Petrova* 153
Complexing properties of the main organic acids used in decontamination solutions for nuclear power plants and reactions involved in their degradation or elimination, *B. Bayri, R. Rosset, J. Desbarres, A. Jardy, D. Noel, O. Kerrec and B. Lantes* 159
State of the art of water chemistry of Japanese BWRs, *K. Ishigure* 171
Primary coolant chemistry in VVER units, *J. Kysela, M. Zmitko, V.A. Yurmanov and V.F. Tiapkov* 185
Selection criteria for the best secondary water chemistry, *F. Nordmann and J.-M. Fiquet* 193

Thermal—Hydraulics, Safety and Risk Analysis

Real-time risk assessment of operational events, *L.J. Perryman, N.A.S. Foster, D.R. Nicholls and J.F. Grobbelaar* 203
Two passive safety systems in a 200 MW demonstration nuclear heating plant, *M. Peng, C. Ma, S. Bi, D. Wan, X. Li, R. Li, Y. Gao and W. Li* 213

Technical Engineering Notes

Probabilistic assessment of the fracture mechanics behaviour of an HTR-module primary circuit pressure boundary, *M. Staat* 221
Laser shearography for inspection of pipelines, *A. Ettemeyer* 237
The safety of nuclear power station components, *E. Roos, K. Maubach and N. Albert* 241
Verification of the VVER-440 pressure vessel neutron fluence calculation by activity measurement, *K. Ilieva, T. Apostolov, I. Penev, S. Belousov, E. Taskaev, S. Antonov, T. Petrova, P. Tzokov and Z. Bojadjiev* 257
Seismic damage analysis of concrete members, *Y. Li and S. Zhao* 261

Announcement 267
Instructions to Contributors 269

CONTENTS OF ISSUE 160(3)

Extended and Updated Selected Papers from SMiRT-12, Division M

Preface ix
Probabilistic safety assessment past, present and future; An IAEA perspective, *L. Lederman, F. Niehaus and B. Tomic* 273
Fragility estimation for seismically isolated nuclear structures by high confidence low probability of failure values and bi-linear regression, *A. Cărăuşu and A. Vulpe* 287
Normalized failure cost as a measure of a structure importance, *Jun Kanda* 299
Simple method of evaluating the failure probability of a structure considering the skewness of distribution, *T. Ugata and K. Moriyama* 307
Seismic damage hazard analysis for requalification of nuclear power plant structures: methodology and application, *P. Bazzurro, C.A. Cornell, D. Diamantidis and G.M. Manfredini* 321
Random thermal fatigue in fast breeder reactor: a narrow-band spectrum, *Hiroaki Tanaka and Michiko Toyoda* 333
Direct analysis method for probabilistic fracture mechanics, *Hiroshi Akiba, Shinobu Yoshimura and Genki Yagawa* 347
Stochastic seismic response analysis of soft soil sites, *J.A. Pires* 363
Dynamic characteristics of welded structures, *Shigeru Aoki* 379
The seismic reliability of VVER-1000 NPP prestressed containment building, *P. Varpasuo* 387
Scram reliability under seismic conditions at the Experimental Breeder Reactor II, *J. Roglans, C.Y. Wang and D.J. Hill* 399

Seismic probabilistic safety analysis of unit 1 of the Loviisa nuclear power plant, *P. Varpasuo, J. Puttonen and M.K. Ravindra* 411
Seismic reliability of electrical power transmission systems, *J.A. Pires, A.H.-S. Ang and R. Villaverde* 427

Contents of Volume 160 441
Author Index of Volume 160 445
Subject Index of Volume 160 447
Instruction to Contributors 449